REMARKS

Claims 1-15 are pending in this application with claims 10 and 11 currently withdrawn from consideration.

I. Rejections Under 35 U.S.C. §103(a)

A. Murray et al.

Claims 1, 3-9, 12, 14 and 15 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 5,648,585 to Murray et al. (hereinafter "Murray"). This rejection is respectfully traversed.

The Patent Office acknowledges that Murray fails to teach cooling a catalyst after a first stage to a temperature below that of the first stage before the introduction of oxygen (see page 4 of the Office Action). The Patent Office alleges that it would be obvious to decrease the temperature of the reactor before the addition of oxygen because Murray notes that it is important in the regeneration process to avoid runaway exotherms above the desired maximum regeneration temperatures of the reactor. Applicants respectfully disagree with these allegations by the Patent Office.

Murray fails to teach or suggest a step wherein the reactor is rinsed with a nitrogen stream heated to an entrance temperature of 460 to 500 °C to rinse air from the zeolite catalyst as required by claim 1.

Not only does rinsing the reactor with a nitrogen stream heated to an entrance temperature of 460 to 500 °C rinse air from the zeolite catalyst, but it also surprisingly and unexpectedly transfers a part of the absorbed carbon to hard carbon residues which have a high refractory and are hard to remove by regenerative means.

Murray discloses that the reactor is cooled to a temperature of 288 °C and purged with nitrogen. Murray, at best, teaches that hot gas, such as nitrogen and/or hydrogen, may be used to strip any strippable hydrocarbon from the catalyst prior to regeneration (see col. 9, lines 60 and 61). Nowhere does Murray teach or suggest that hot gas, such as nitrogen, is or may be used to rinse air from a reactor.

The Patent Office alleges that it is well-known in the art that temperature control in the zeolite regeneration process is an essential consideration and one would have been motivated to optimize the temperature within the prior art conditions through routine experimentation. However, Applicants submit that one of ordinary skill in the art would not achieve the present invention by merely optimizing the temperature of the purging nitrogen according to Murray because Murray teaches cooling the reactor after regeneration and subsequently purging the reactor with nitrogen.

Thus, Applicants submit that cooling the reactor to 288 °C and purging it with nitrogen according to Murray does not teach or suggest rinsing a reactor with a nitrogen stream heated to an entrance temperature of 460 to 500 °C as specifically defined in claim 1.

Therefore, Murray fails to teach or suggest the present process as specifically defined in claim 1. Accordingly, claim 1 and its dependent claims are patentable over Murray.

For all the foregoing reasons, Applicants respectfully submit that Murray would have led one of ordinary skill in the art to required features of claims 1, 3-9, 12, 14 and 15. Reconsideration and withdrawal of this rejection are respectfully requested.

B. Murray in view of Confuorto et al.

Claims 2-9 and 13 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Murray in view of U.S. Patent No. 6,551,565 to Confuorto et al. (hereinafter "Confuorto"). The rejection is respectfully traversed.

Confuorto does not remedy the deficiencies of Murray as described above with respect to claim 1, from which claims 2-9 and 13 depend.

As discussed with respect to claim 1, Murray does not teach or suggest use of a nitrogen stream heated to an entrance temperature of 460 to 500 °C to rinse air from the zeolite catalyst as required by claim 1. Confuorto fails to remedy the deficiencies of Murray because Confuorto does not teach or suggest rinsing a reactor with a nitrogen stream heated to an entrance temperature of 460 to 500 °C. Thus, neither Murray nor Confuorto, taken singly or in combination, teaches or suggests a step wherein the reactor is rinsed with a nitrogen stream heated to an entrance temperature of 460 to 500 °C to rinse air from the zeolite catalyst as required by claim 1.

Because these features of independent claim 1 are not taught or suggested by Murray and Confuorto, taken singly or in combination, these references would not have rendered the features of claim 1 obvious to one of ordinary skill in the art.

For at least these reasons, claims 2-9 and 13 are patentable over Murray and Confuorto. Thus, reconsideration and withdrawal of this rejection are respectfully requested.

II. Rejoinder

Applicants submit that upon allowance of claims 1-9 and 12-15, claims 10 and 11 should be rejoined with the application and similarly allowed.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-15 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

PETITION FOR A THREE-MONTH EXTENSION OF TIME

Applicants respectfully petition for a three-month extension of time in order to permit for the timely entry of this response. The Commissioner is hereby authorized to charge the fee to Deposit Account No. 14-1263 with respect to this petition.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Respectfully submitted,
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